

IN THE CLAIMS:

Claims 1-2: (Cancelled)

Claim 3 (Currently Amended): Process for the preparation of nano size zinc oxide ~~gels according to Claim 1 by~~ particles having an average primary particle diameter of ≤ 15 nm, determined in a transmission electron micrograph, which are redispersible in organic solvents and/or water, comprising

- 16
- a) carrying out basic hydrolysis of at least one zinc compound in alcohol or an alcohol/water mixture, characterized in that wherein the hydrolysis is carried out with substoichiometric amounts of base, based on the zinc compound, to form a precipitate;
 - b) leaving the precipitate which initially forms during hydrolysis is left to mature until the zinc oxide has completely flocculated,
 - c) then this thickening the precipitate is thickened to give a gel; and
 - d) separated off separating the gel from the supernatant phase.

Claim 4 (Currently Amended): ~~Process for the preparation of zinc oxide gels according to Claim 2 by basic hydrolysis of at least one zinc compound in alcohol or an alcohol/water mixture, characterized in that the precipitate which initially forms during hydrolysis is left to mature until the zinc oxide has completely flocculated, then this precipitate is thickened to give a gel and separated off from the supernatant phase and that,~~ The process of Claim 3, wherein prior to, during or after precipitation, from 0.01 to 3 mol% of foreign ions, based on proportion of zinc, are added.

Claim 5 (Currently amended): Process according to ~~one or more of claims~~ Claim 3 and 4, characterized in that wherein the zinc compound is comprises at least one of zinc acetate and/or and zinc acetate dihydrate.

Claim 6 (Currently amended): Process according to Claim 5, ~~characterized in that~~ wherein the at least one of zinc acetate ~~and/or and~~ zinc acetate dihydrate is prepared from zinc oxide in an upstream process.

Claims 7-10: (Cancelled)

Claim 11 (Currently Amended): ~~Process for the preparation of zinc oxide sols according to one or more of the preceding Claims 8 to 10, characterized in that zinc oxide gels according to Claim 1 or 2 are~~ The process of Claim 3, wherein the gel is redispersed in organic solvents and/or water, optionally with the addition of surface-modifying compounds.

ab Claim 12 (Currently Amended): ~~Process for the preparation of zinc oxide sols according to Claim 9 by basic hydrolysis of at least one zinc compound in alcohol or an alcohol/water mixture, characterized in that the precipitate which initially forms during hydrolysis is left to mature until the zinc oxide has completely flocculated, and this precipitate is~~ The process of Claim 3, wherein the gel is redispersed by adding dichloromethane and/or chloroform.

Claim 13 (Currently Amended): ~~Use of zinc oxide gels according to Claim 1 and 2 for~~ Method of performing the matrix modification of polymers, paint and coatings, as an improved vulcanization activator for rubbers and latices, for the UV protection of polymers, paints and coatings, and for the UV protection of sensitive organic dyes and pigments comprising adding the gel according to Claim 3 to the polymers, paints and coatings.

Claim 14 (Cancelled)

Claim 15 (New): Method of producing a vulcanization activator for rubbers and latices, comprising adding the gel according to Claim 3 to the rubbers and latices.

a7 Claim 16 (New): Method of protecting polymers, paints and coatings from UV, comprising adding the gel according to Claim 3 to the polymers, paints and coatings.

Claim 17 (New): method of providing UV protection of sensitive organic dyes and pigments, comprising adding the gel according to Claim 3 to the dyes and pigments.